Appendix A

Panel Charter

The Space Technology Panel's charter as derived by SECAF letter, 29 Nov 94, and discussions with Dr. Gene McCall, Chairman of the Scientific Advisory Board, was to:

- Identify new technologies for space applications in a 10-30 year timeframe which will offer:
  - Fundamental improvements in Air Force capabilities
  - Significantly lower costs for existing capabilities
- Consider the impact of commercial or dual use technologies for space for the future and identify the technology path for incorporation into Air Force systems
- Seek out technologies that may lead to new paradigms in space applications

Space Technology Panel Process

The Space Technology Panel conducted a series of information gathering sessions, listed in Appendix C, beginning in March 1995 and concluding in July 1995. The panel solicited information from a variety of government, industry and academic sources. To focus the information received, the panel asked the following questions:

- What is the current state of the art in space technology?
- How will space technology evolve over the next 10-30 years?
- What impact will technology have on the affordability, performance and capability of Air Force systems?
- What technologies will the commercial world develop?
- What technologies should the Air Force invest in and which should they buy?
- What will be the costs (development, adaptation and incorporation) of these technologies and how well can these be predicted?
- What is a technology roadmap from the current technologies to the future?
- If current limitations on launch, power, bandwidth, etc. were removed, what space applications would be possible and what technologies would enable them?

At the same time the Space Technology Panel conducted its investigations of technologies, the Space Applications Panel was gathering information, generating ideas, and identifying issues dealing with requirements, missions, and concepts. These two panels interacted routinely to ensure consistency and completeness in the panels' conclusions and recommendations. The Space Application Panel provided insight into market or threat driven needs and areas where current technology investment was insufficient to meet military requirements (requirements

pull). The Space Technology Panel provided the Space Applications Panel input on emerging technologies that could offer significant new applications or improvements (technology push), such as rapid advances being made in computers, micromechanical devices, sensors, information technology, materials, and multi-functional structures.

In addition to briefings from various organizations and interaction with the other New World Vistas panels, the Space Technology Panel reviewed recent studies and reports (listed in Appendix G), including *Spacecast 2020, Seven Strategies for Space*, the *Space Critical Technologies Study*, the *Space Launch Ad Hoc Study*, and the *Space Launch Modernization Study* (Moorman Study). The panel also requested white papers from numerous organizations; these are listed in Appendix F.